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A presentation for the
Planning Community of Practice
Annual Conference
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Nexus Projects in Kansas City's Suburban Watersheds

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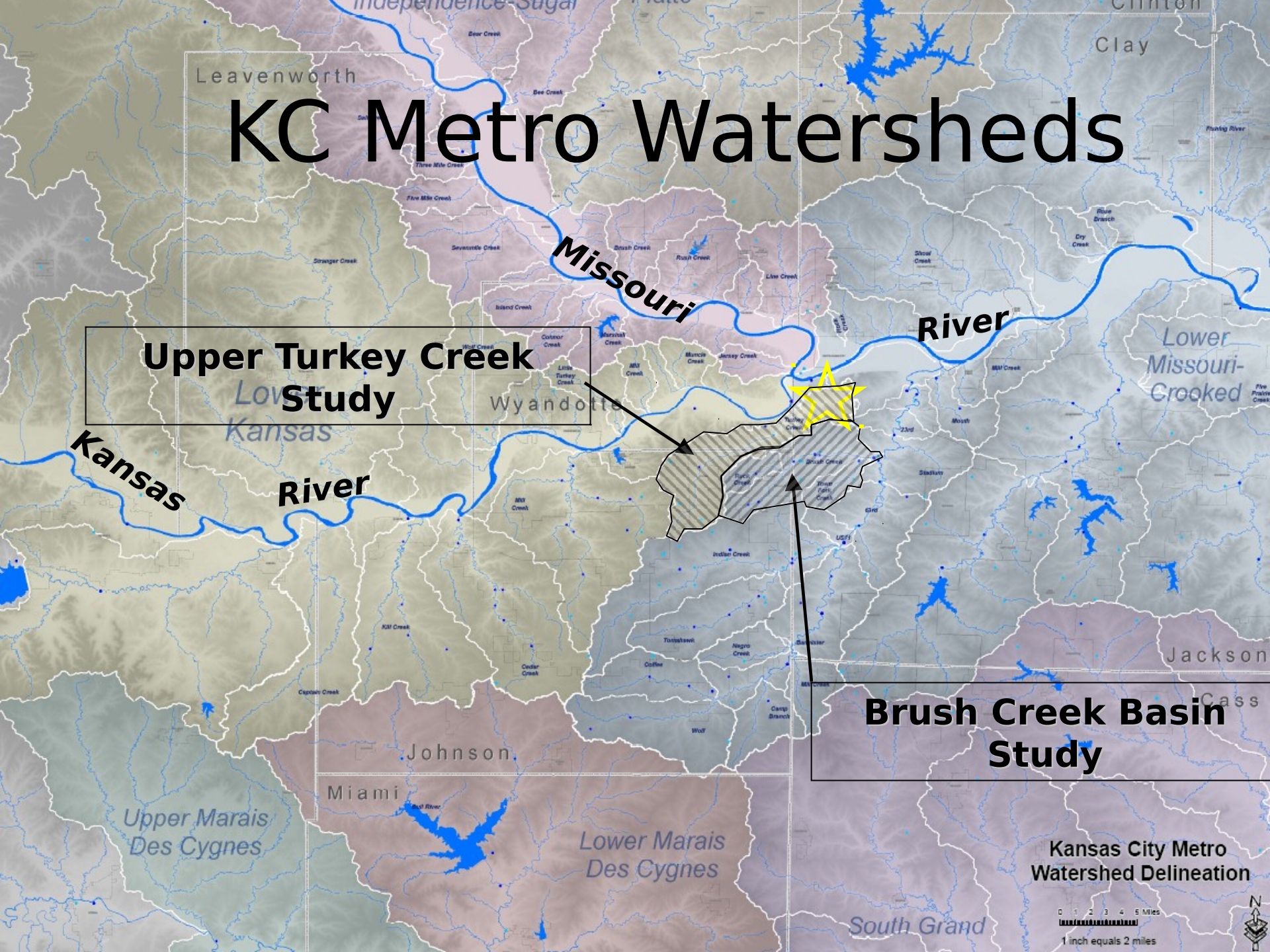
Watershed Planning

Corps references

- *Planning Guidance Notebook* (ER1105-2-100, p.2-16, p.3-37)
- *Application of Watershed Perspective to (Corps) Civil Works Programs and Activities (*Project Guidance Letter 61*)*
- *Planning in a Collaborative Environment* (EC409)
- *Watershed Planning* (draft EC410)
- *Environmental Operating Principles*
- *Strategic Plan for the Civil Works Program for FY04-09*
- Water Resources Development Acts (various)
- “Marriage” of ecosystem restoration and flood risk management missions


KC Metro Watersheds
Missouri River
Kansas River
Upper Turkey Creek Study
Brush Creek Basin Study
Leavenworth
Clay
Wyandotte
Johnson
Miami
Jackson
Cass
Lower Missouri-Crooked
Upper Marais Des Cygnes
Lower Marais Des Cygnes
South Grand
Kansas City Metro Watershed Delineation
1 inch equals 2 miles

Upper Turkey Creek

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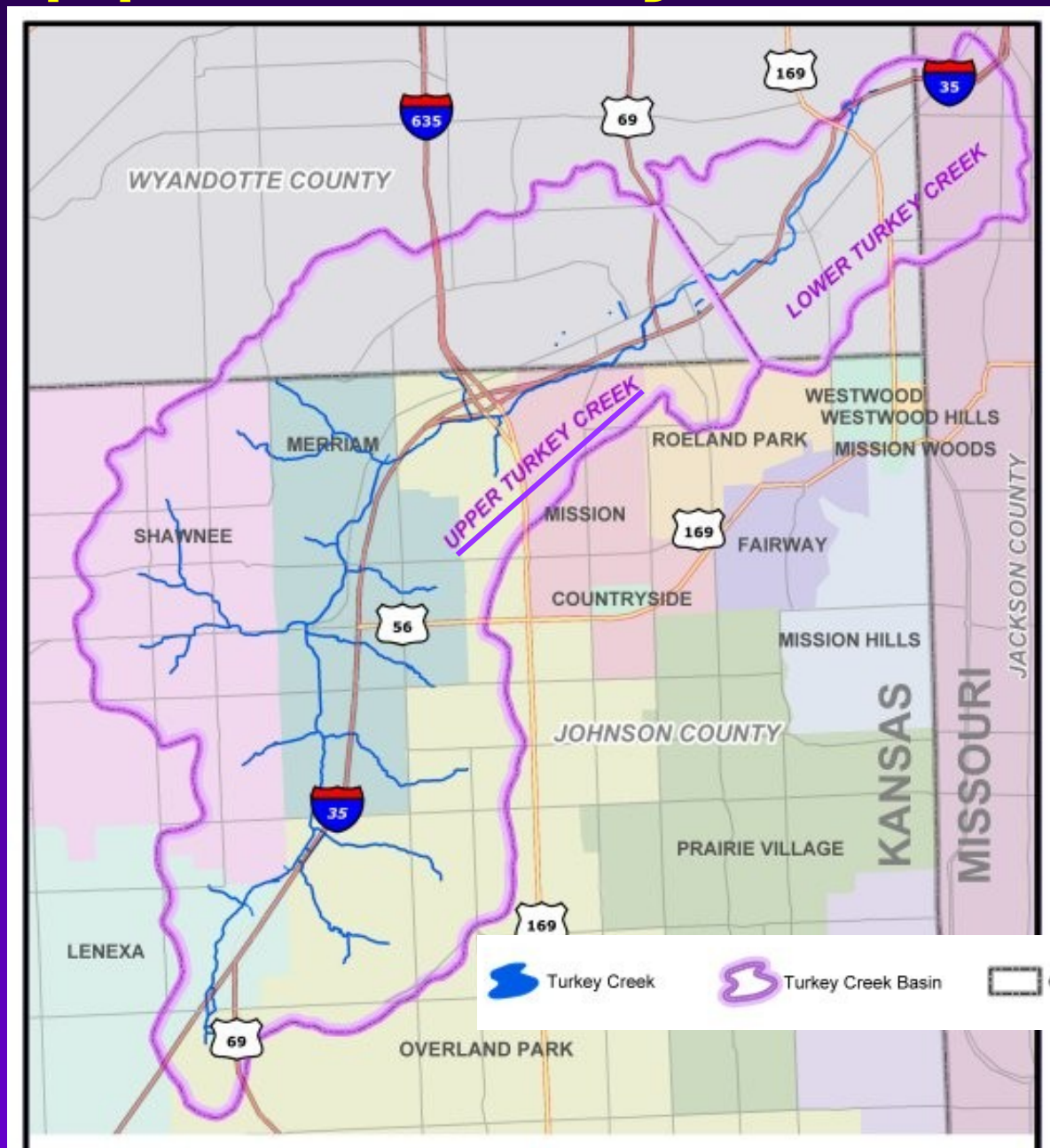
Johnson County Stormwater Management



CITY OF FOUNTAINS
HEART OF THE NATION
KANSAS CITY
MISSOURI

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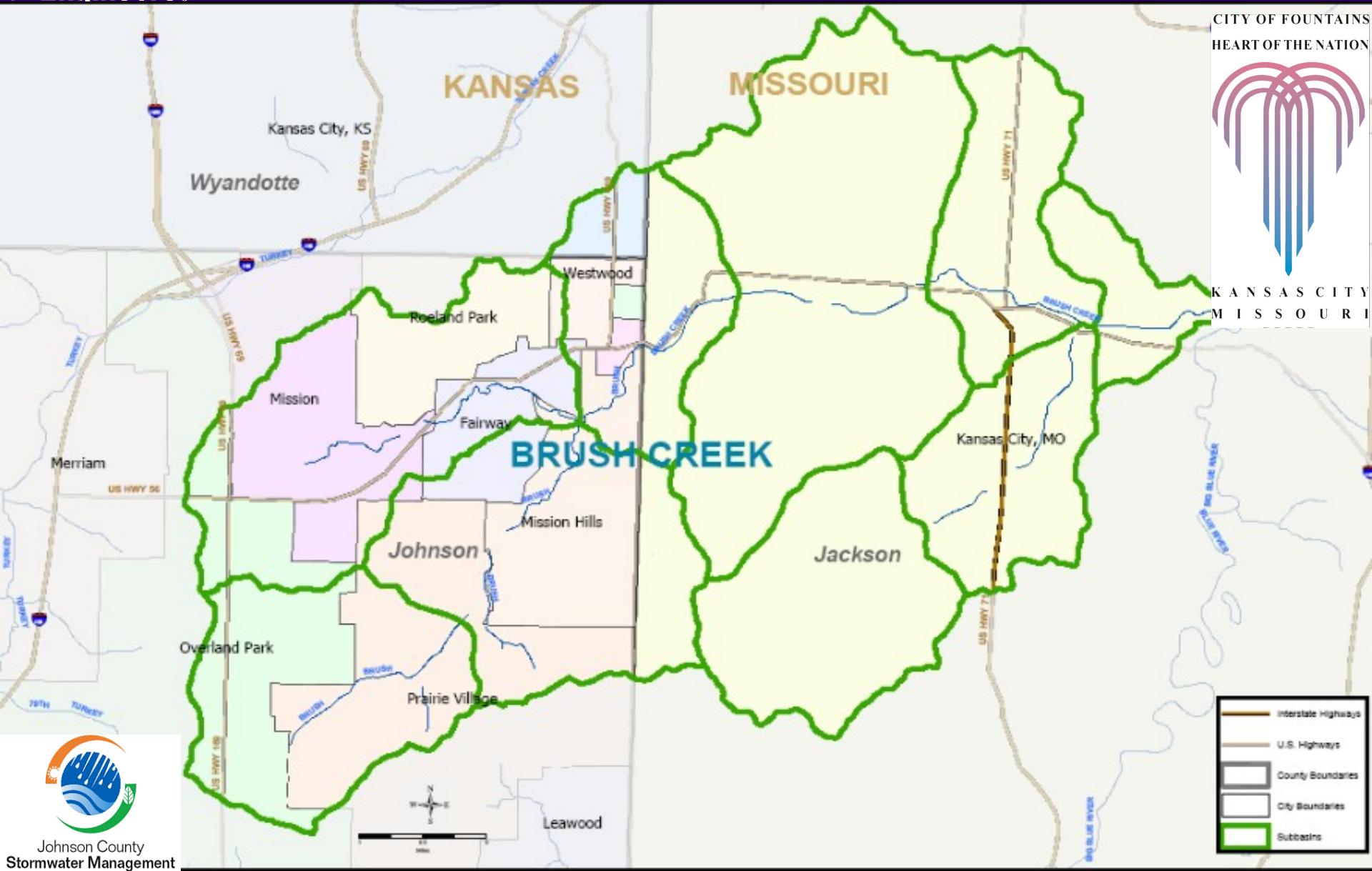
Brush Creek Basin



Johnson County Stormwater Management

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Nexus Projects

"Nexus" projects – water resource initiatives that

- transcend political boundaries
- integrate efforts by local, state, & federal agencies
- manage water quantity & water quality, when possible
- seek to restore ecosystems, where possible
- apply collaborative planning
- use shared vision planning techniques and models
- leverage local funds & any available grants
- avoid repetitive efforts
- pursue & give priority to sustainable projects
- consider multipurpose solutions from more than one mission area
- lay down a process to implement best practices in the

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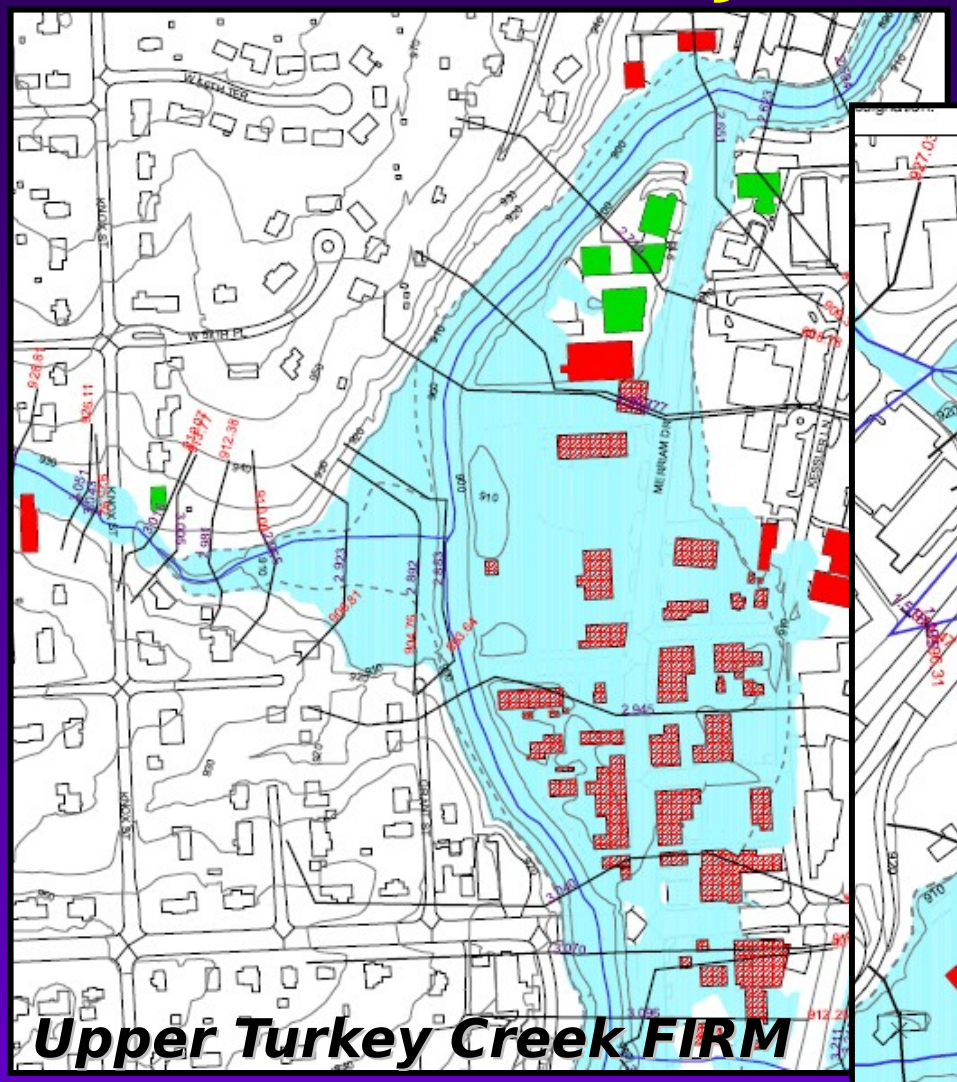
Example Nexus: Draft FIRMs in Johnson County



Upper Turkey Creek FIRM

Brush Creek FIRM

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Situational Awareness

Trend by local cities towards stream buffers & setback ordinances

FEMA re-mappings / revision to FIRMs

Kansas City, MO's Wet Weather Program addressing CSOs (billion$) and KC-ONE

EPA proposed SAMP, and Green Infrastructure memo (March 2007)

KC metro-area's 10,000 Rain Gardens

KC American Public Works Association and Mid-America Reg Council's

- *BMP Manual*
- *5600 Stormwater Design Criteria* with stream setback
- *Metro Green* Trails System & Streamway Parks

USGS reports on stream health

- Blue River (Johnson County & Kansas City, MO)
- Northeast Johnson County watersheds

STREAM RECEIVES COM ED SEWER OVERFLOWS
AVOID CONTACT DURING & 72 HOURS AFTER RAIN STORM!
For more information, call 816-513-0124
LA CORRIENTE RECIBE DESBORDAMIENTOS COMBINADOS DE LAS ALCANTARILLAS
EVITA EL CONTACTO DURANTE Y 72 HORAS DESPUES DE LA TORMENTA DE LLUVIA!
PARA MAS INFORMACION, LLAME 816-513-0124

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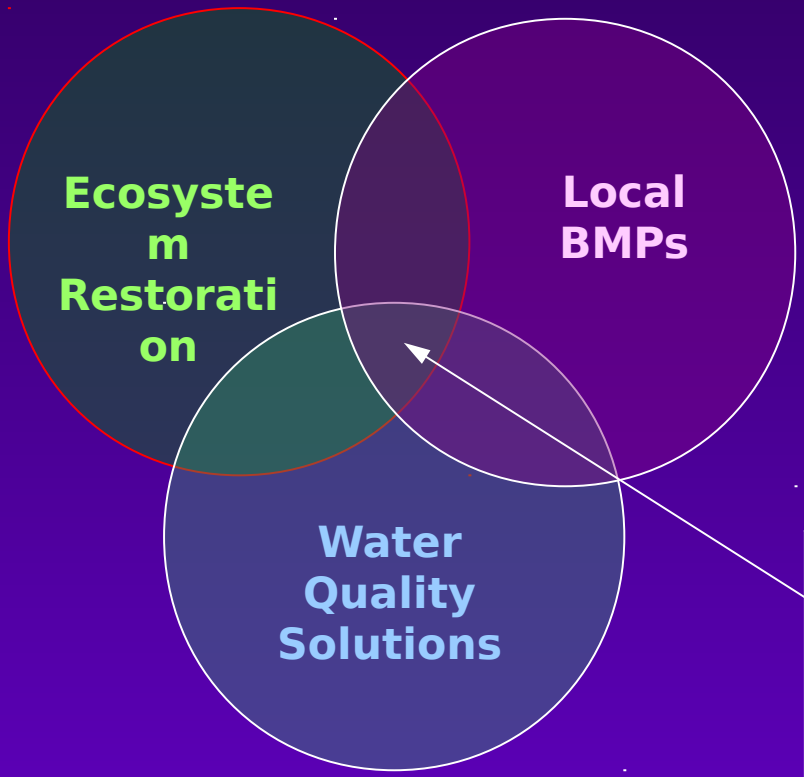
Relevant Water Resource Funding Nexus



Water Quality

An integral part of ecosystem's biology, chemistry, physiology

Channel incisions and sediment issues have changed habitat in urban watersheds

Significant overlap area that many agencies share in stormwater management

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What is Urban Ecosystem Restoration?

Make your case with habitat units; based on approved habitat model

Tie ER to stream within the 2-Year event, the aquatic habitat

Restore canopy / shade, as temperature influences habitat / ecology

Eroding banks mean sediment issues in the watershed

Reconnecting floodplains to streams with benching and native plants

Channel incision problems caused by impervious land may be the problem

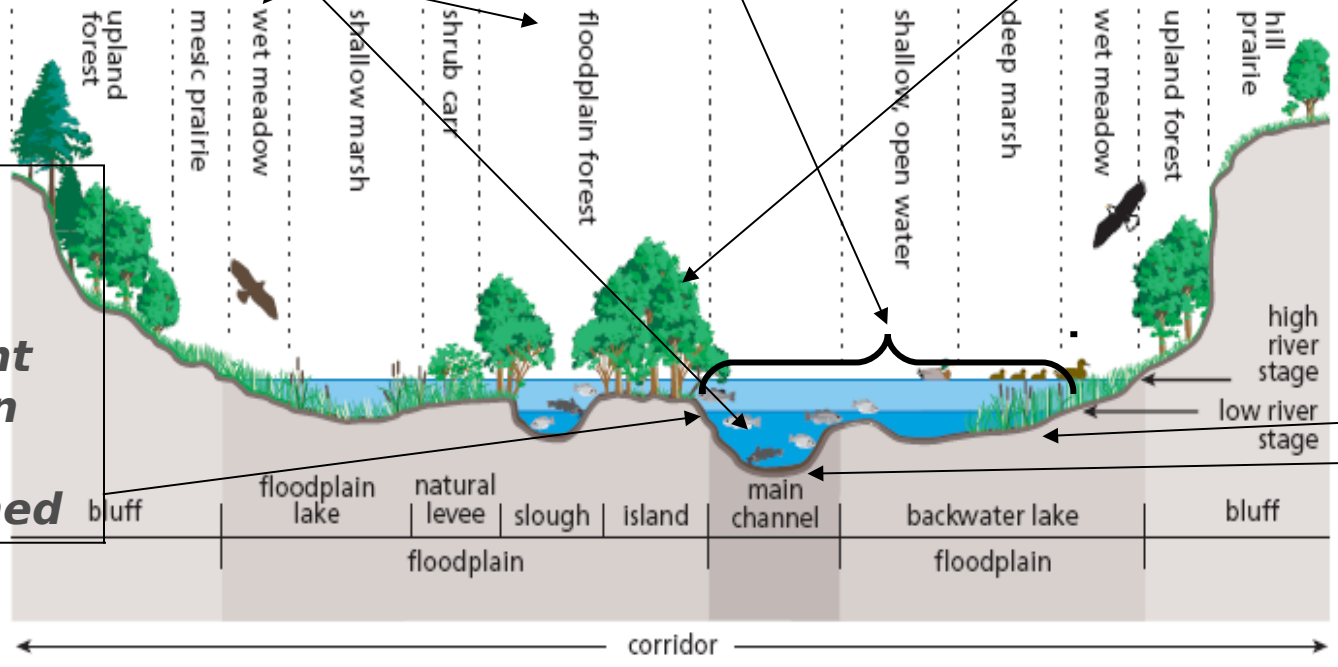

Figure 1.11: A cross section of a river corridor. The three main components of the river corridor can be subdivided by structural features and plant communities. (Vertical scale and channel width are greatly exaggerated.)

Source: Sparks, Bioscience, vol. 45, p. 170, March 1995. ©1995 American Institute of Biological Science.

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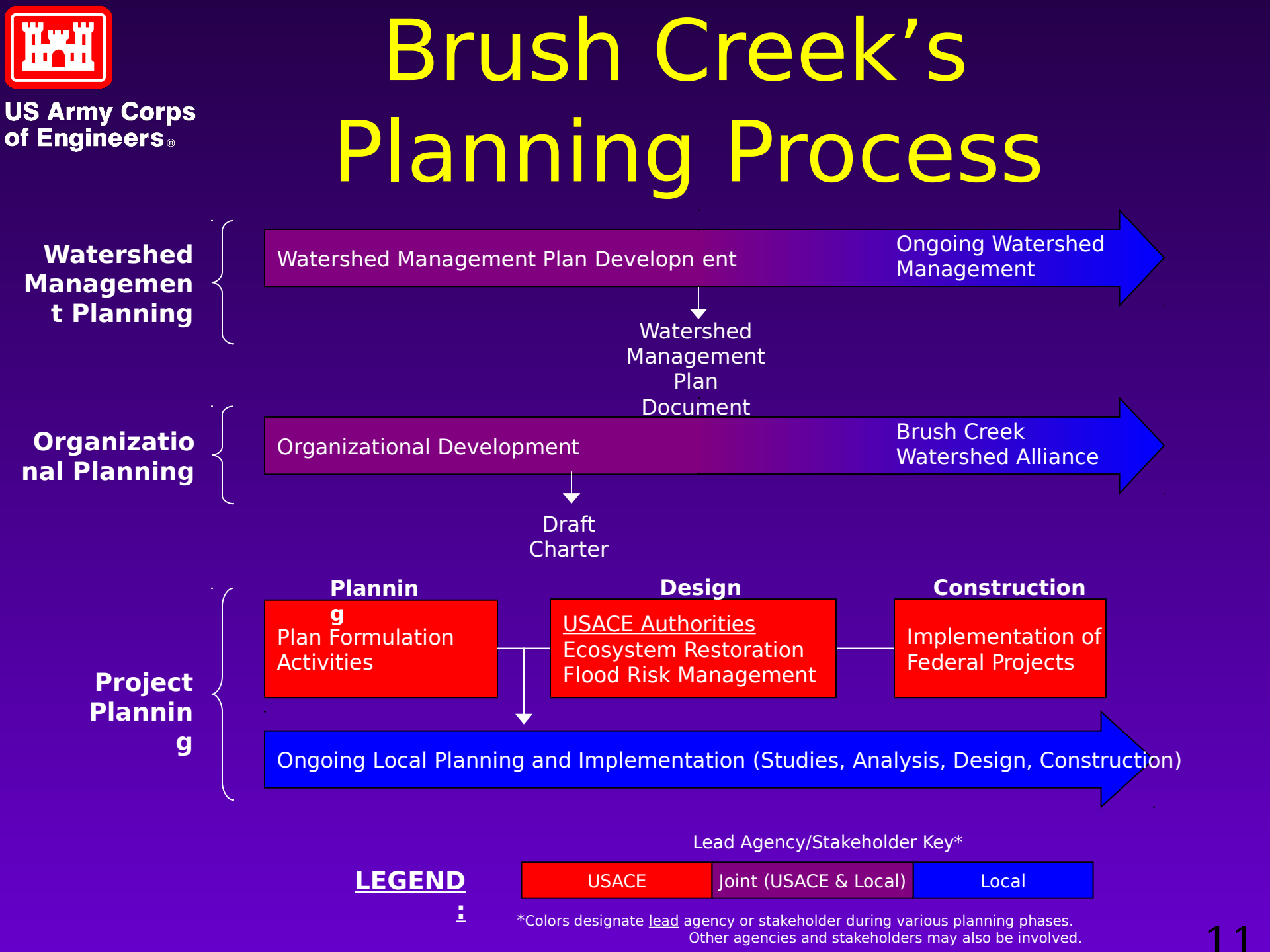
Brush Creek's Planning Process



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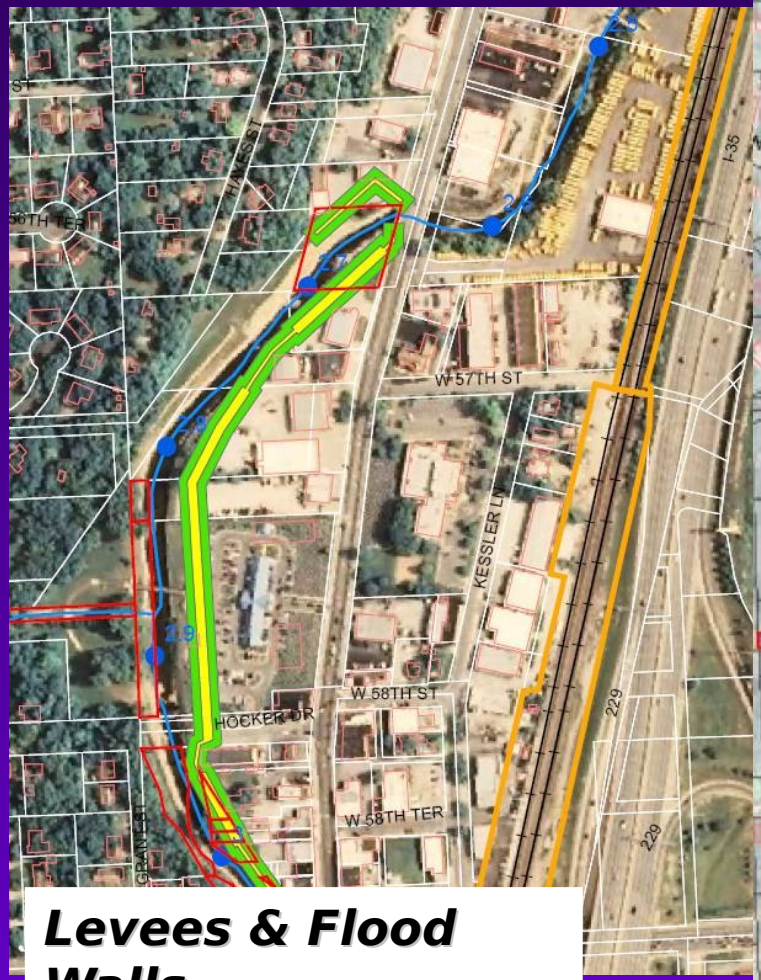
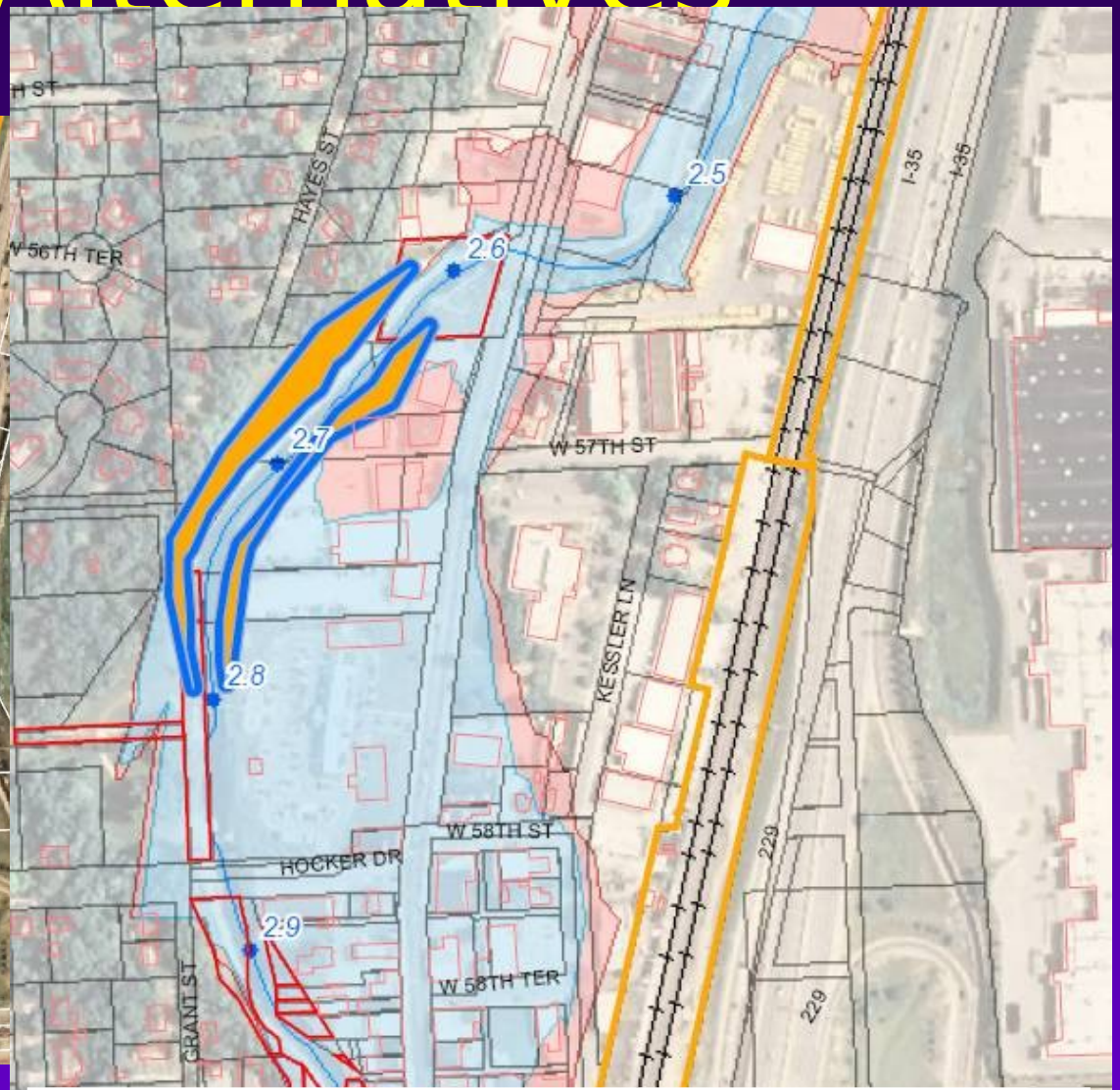
Upper Turkey Alternatives



Levees & Flood Walls



Channelization & Stream Way Restoration

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Upper Turkey Creek Alternatives

Named Alt.s	Measure	Mission Area	Cost	Benefits
Alt. 1	Channelization Only	Flood Risk Management.		
Alt. 2	Levees & Flood Walls Only	Flood Risk Management.		
Alt. 3	Combo: Channelization with Levees & Flood Walls	Flood Risk Management.		
Un-named	Bank Stabilization	Ecosystem Restoration		
Un-named	Restore Streamway (Native Vegetation, Wetlands)	Ecosystem Restoration		
Un-named	**Combo (channel benching), Relocations, & Streamway Restoration**	**Multipurpose** FRM, ER, & Recreation		

Watershed Planning

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Importance of looking at the 50 to 100-year

planning horizon

Where urban

stream corridors

that could be restored *are* the best management practice.

Conclusions

- Recognize **nexus** projects
- Build **partnerships**
- Use technology to help collaboration
- Address the all facets of **stormwater** management
  - water quantity
  - water quality
- Establish a **process** for restoring **stream corridors**